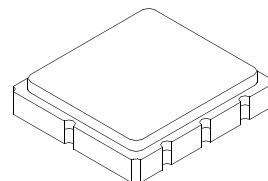


- Ideal Front-End Filter for European Wireless Receivers**
- Low-Loss, Coupled-Resonator Quartz Design**
- Simple External Impedance Matching**
- Complies with Directive 2002/95/EC (RoHS)**
- Tape and Reel Standard per ANSI/EIA-481**
- Moisture Sensitivity Level: 1**
- AEC-Q200 Qualified**

RoHS  
Compliant

**RF3414E**

**372.5 MHz  
SAW Filter**



**SM3030-6 Case  
3.0 x 3.0**

The RF3414E is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 372.5 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen. Typical applications of these receivers are wireless remote-control and security devices operating in Europe under ETSI I-ETS 300 220, in Germany under FTZ 17 TR 2100, in the United Kingdom under DTI MPT 1340 (for automotive only), in France under PTT Specifications ST/PAA/TPA/AGH/1542, and in Scandinavia.

This coupled-resonator filter (CRF) uses selective null placement to provide suppression, typically greater than 40 dB, of the LO and image spurious responses of superhet receivers with 10.7 MHz IF. RFMi's advanced SAW design and fabrication technology is utilized to achieve high performance and very low loss with simple external impedance matching (not included).

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units			
Center Frequency @ 25°C    Absolute Frequency	$f_C$		372.420	372.5	372.580	MHz			
Insertion Loss	IL			2.4	3.0	dB			
3 dB Bandwidth	$BW_3$		300	400	500	kHz			
Rejection	0 - 354 MHz 354 - 364 MHz 364 - 369 MHz 369 - 370 MHz 374 - 378 MHz 378 - 380 MHz 380 - 382 MHz 382 - 389 MHz 389 - 1000 MHz		40 35 25 14 25 15 20 25 40	43 38 28 17 28 18 23 28 43		dB			
Temperature	Freq. Temp. Coefficient	FTC		0.032		ppm/°C <sup>2</sup>			
Frequency Aging	Absolute Value during the First Year	$ f_A $		<±10		ppm/yr			
Impedance @ $f_C$	Input $Z_{IN} = R_{IN}/C_{IN}$	$Z_{IN}$		887Ω // 4.7pF					
	Output $Z_{OUT} = R_{OUT}/C_{OUT}$	$Z_{OUT}$		908Ω // 4.0pF					
Lid Symbolization (in addition to Lot and/or Date Codes)									
720, YWWS									
Standard Reel Quantity	7 Inch Reel			500 Pieces/Reel					
Standard Reel Quantity	13 Inch Reel			3000 Pieces/Reel					

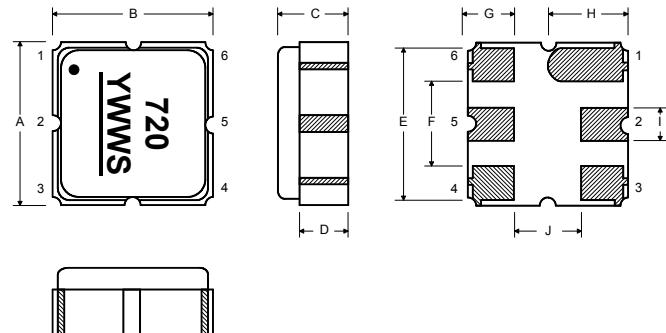


1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +125	°C
Operable Temperature Range	-40 to +125	°C
Soldering Temperature (10 seconds / 5 cycles max.)	260	°C

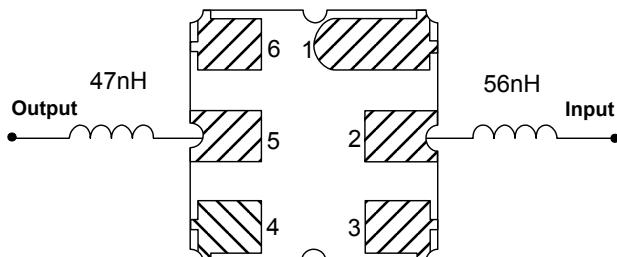
### Electrical Connections

Pin	Connection
1	Input Ground
2	Input
3	Ground
4	Output Ground
5	Output
6	Ground



### Case Dimensions

#### Matching Circuit to 50Ω

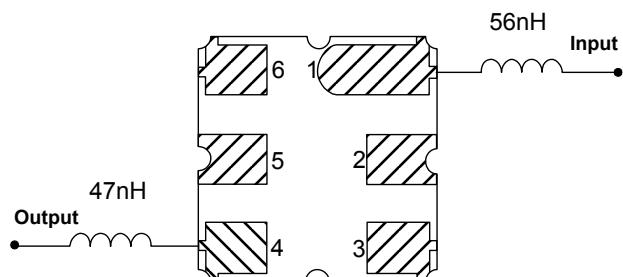


Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.0	3.13	0.113	0.118	0.123
B	2.87	3.0	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.6	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.5	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056

#### OPTIONAL Electrical Connections

Pin	Connection
1	Input
2	Input Ground
3	Ground
4	Output
5	Output Ground
6	Ground

#### Matching Circuit to 50Ω



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

